

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM  
STATEMENT OF INVESTMENT POLICY**

**FOR  
EQUITY INDEX FUNDS – INTERNALLY MANAGED**

**August 15, 2005**

*This Policy is effective immediately upon adoption.*

**I. PURPOSE**

This document sets forth the investment policy (“the Policy”) for the Internally Managed Equity Index Funds - (“the Funds” or “the Portfolios”). Throughout this Policy, Funds and Portfolios are used interchangeably. The design of this Policy ensures that the investors, managers, consultants, or other participants selected by the California Public Employees’ Retirement System (“the System”) take prudent and careful action while managing the funds. Additionally, use of this Policy provides assurance that there is sufficient flexibility in controlling risks and capturing returns associated with this segment of investments.

**II. STRATEGIC OBJECTIVE**

Obtaining broad equity market exposure achieved by closely tracking the designated benchmark indices is the strategic objective of the Funds.

The Funds shall be managed to accomplish the following:

1. Enhance the System’s total return;
2. [Hedge](#) against active (pre-retirement) liabilities;
3. Provide diversification to the System’s overall investment program;  
and
4. Consider solely the interest of the System’s participants and their beneficiaries in accordance with California State Law.

**III. RESPONSIBILITIES AND DELEGATIONS**

- A. The **System’s Investment Committee** (“the Investment Committee”) is responsible for approving and amending the Policy. The Investment Committee delegates the responsibility for administering the Funds portion of the System to the Investment

Staff through the Delegation of Authority (Delegation No. 89-13 and 95-50).

**B. The CalPERS Investment Staff (“the Staff”)** duties include, but are not limited to, the following:

1. Developing and recommending the Policy to the CalPERS Investment Committee;
2. Maintaining procedure manuals, which are subject to periodic review and updates, outlining Staff operational procedures used in implementing this Policy;
3. Implementing and adhering to the Policy;
4. Reporting immediately to the Investment Committee all violations of the Policy with explanations and recommendations;
5. Purchasing only securities that are outlined in this Policy; and
6. Reporting internally to senior management, and to the Investment Committee as needed, on the implementation of this Policy. These reports will be prepared monthly to include, but is not limited to the following:
  - a. Current market value of the Portfolios;
  - b. Performance of the Portfolios versus the benchmarks as reported by the master custodian; and
  - c. [Performance attribution](#) analysis which accredits return to its causes.

**C. The General Pension Consultant (“General Pension Consultant”)** is responsible for monitoring, evaluating, and reporting to the Investment Committee, at least quarterly, the performance relative to the benchmarks and policy guidelines. The General Pension Consultant is responsible for reporting non-compliance issues with its contract with the System.

Monitoring shall include placing the Funds on Watchlist Status using the following criteria:

1. Domestic Equity Index Watchlist Status: If the realized annual [return deviation](#) is less than -70 basis points for two consecutive quarters, and the [forecasted tracking error](#) is

greater than 50 basis points, then the Portfolio will be eligible for watchlist.

2. Domestic Microcap Index Watchlist Status: If the realized annual return deviation is less than -500 basis points for two consecutive quarters, and the forecasted tracking error is greater than 300 basis points, then the Portfolio will be eligible for watchlist.
3. International Equity Index Watchlist Status: If the realized annual return deviation is less than -60 basis points for two consecutive quarters, and the forecasted tracking error is greater than 25 basis points, then the Portfolio will be eligible for watchlist.

#### IV. PERFORMANCE OBJECTIVES

Achieving the return for the broad equity market is the performance objectives of the Funds. To accomplish these objectives, using statistical models to approximate the return of the market, rather than replicate, may be more cost effective.

Return deviations between the Portfolios and the designated benchmarks will be random, as expected. To account for the difference in the methodology for calculating the returns of the benchmarks and the Portfolios, the resulting return deviation may require an adjustment. The System shall set parameters in the statistical models it employs in such a manner that [tracking error](#) shall be within the following thresholds:

1. Domestic Equity Index: Forecasted tracking error shall be within  $\pm 50$  basis points; realized returns should fall no more than 50 basis points below the benchmark over any 12 month period.
2. Domestic Microcap Index: Forecasted tracking error shall be within  $\pm 300$  basis points; realized returns should fall no more than 300 basis points below the benchmark over any 12 month period.
3. International Equity Index: Forecasted tracking error shall be within  $\pm 25$  basis points; realized returns should fall no more than 25 basis points below the benchmark over any 12 month period.

The System shall allow wider tracking error and return deviation when they result from a deliberate decision to reduce turnover or to control a specified risk contained in the Portfolios.

## V. INVESTMENT APPROACHES AND PARAMETERS

### A. Investment Approaches

The Portfolios shall be managed in a structured fashion to achieve the stated performance objective. Structured investing can be achieved through replication or through an optimized, [sampled](#) approach to generate an actual Portfolio with risk characteristics closely resembling the benchmark. The actual implementation used for each Portfolio will be dependent on the specific characteristics of the applicable benchmark. A benchmark with a broader number of constituents and greater exposure to small capitalization securities will typically not be replicated due to liquidity and trading cost considerations.

Where an [optimization](#) approach is employed, a statistical risk model is used to define and decompose the Portfolio's risk exposures versus those of the benchmark. [Fundamental risk models](#) measure stock returns associated with industry and other fundamental factors such as domicile, price/earnings (P/E), yield, and [market capitalization](#). Such fundamental factors are referred to often as ["common" factors](#).

A common factor is an element of return that influences many securities and, hence, is a "common factor" in the returns on those securities. Based on the current Portfolio's exposure to country, industry, and common factors, the volatility of returns can be estimated. The information about volatility produced by a fundamental risk model can be used to evaluate Portfolio risk, decompose Portfolio risk according to common factor exposures, and evaluate how much of a Portfolio's return in a given period was due to each common factor exposure and how much was due to stock selection.

### B. Tracking

Maintaining a Portfolio's risk characteristics in line with the benchmark can minimize return deviation. A stock market index is a purely mathematical construction. Its performance will inevitably be different from that of any actual Portfolio. This is generally because indices are constructed in mathematically sound ways that can never, in practice, be replicated. The following list highlights technical reasons why a Portfolio will not perfectly track a benchmark index:

1. The index is fully invested at all times. An actual Portfolio will inevitably carry minimal cash equivalents.

2. Transaction costs are incurred while investing cash flow, [rebalancing](#) the index fund exposure to meet asset allocation requirements, meeting index reconstitution and income reinvestment requirements.
3. Dividends are treated in an unrealistic way. The index assumes the dividend becomes available as soon as a stock goes ex-dividend and, thus, earns the equity rate of return. The dividend may not actually be received into the Portfolio for several weeks.
4. The System's custodian and the index vendor's calculation methodologies may differ slightly, resulting in slightly differential performance.
5. The reconstitutions of the benchmarks cause turnover but no transaction costs are imputed in the index calculations. In order to minimize transaction costs in the Portfolios, transitions to the reconstituted benchmarks may be done gradually rather than in one day. Some securities which are deleted from the benchmark may be retained in the Portfolio to minimize transaction cost if they generate little or no expected tracking [variance](#).

Because the Portfolio must incur transaction costs to purchase and sell securities, a trade-off must be made between incurring transaction costs and minimizing forecast tracking error. Since transaction costs are always negative and will reduce the value of the Portfolio, while tracking error can be positive or negative, consideration will be given to accepting greater return deviation.

6. Some [corporate actions](#) and index reconstitution effects cannot be replicated perfectly due to timing and / or market constraints.

### **C. Specific Risk Parameters**

Specific risk parameters shall limit the return deviation of the Portfolio versus the benchmark. A number of models shall ensure that the risk parameters are within an acceptable tolerance level to achieve the performance objectives. Since the System shall add or eliminate models, the specific risk parameters for each model are detailed in the Procedures Manuals.

Implementation of this program shall comply at all times with the System's investment policies including, but not limited to, the following:

1. Permissible Country Equity Policy;
2. Foreign Exchange Guidelines;
3. Statement of Investment Policy: Derivatives – Investment Office; and
4. Proxy Voting Policies.

**D. Restrictions**

1. Individual security positions are normally limited to no more than 5% of the outstanding shares for the security. In unusual situations, a security position may exceed the 5% limit if the expected selling cost would materially impact the tracking objectives. In no instance shall a security position greater than 10% of the shares outstanding be maintained.
2. The Portfolio may not purchase the securities of primary tobacco companies as identified by the Investor Responsibility Research Center Tobacco Company List.

**E. Permissible Securities**

1. Equity and associated securities of global publicly traded companies.
2. The Portfolio may hold securities not represented in the designated benchmark. Generally, these holdings in aggregate shall be limited to less than 3% of the Portfolio's total market value. Such holdings are justified by the following reasons:
  - a. Liquidity constraints or excessive transaction costs, such as those required to sell certain securities obtained from corporate actions or from past benchmark reconstitutions; or
  - b. Are held as a proxy for a benchmark asset that is illiquid or unavailable; or
  - c. Expectation of inclusion in the benchmark at the next reconstitution.

## **F. Corporate Actions**

Corporate actions (e.g., [tender offers](#), [mergers](#), [Dutch-auctions](#), or [spin-offs](#)) shall be handled on a case-by-case basis.

Companies which offer discount Dividend Reinvestment Programs (DRIP) and similar programs will be analyzed to determine if return enhancement can be added by participating in such programs.

## **G. Rebalancing and Trading Activity**

The rebalance decision for any Portfolio is primarily based upon analysis of risk and potential performance deviation from the benchmark. Portfolio rebalancing shall be performed as necessary to maintain the Portfolio's risk characteristics in accordance with those of the benchmark. At a minimum, the Portfolio shall be reviewed at reconstitutions or monthly. The Portfolios will be analyzed to reduce [systematic](#) and [nonsystematic risk](#) while minimizing transaction costs.

A variety of trading techniques and liquidity sources shall be utilized to obtain best execution of the approved trade list.

Transaction cost analysis shall be performed and evaluated on a quarterly basis for monitoring trading efficiency as compared to that of a like universe. An outside vendor may prepare this analysis.

## **H. Attribution Analyses**

### **1. Performance Attribution Report**

A performance attribution report concerning the Fund shall be generated monthly to ascribe performance to common factors, economic or industry sectors, and stock selection. Returns shall be analyzed to determine where performance is derived and if any appropriate adjustments should be made to the Portfolio.

### **2. [Risk Attribution](#) Summary**

A risk attribution report shall be generated monthly displaying the total, systematic, and non-systematic risk of the Portfolio relative to the benchmark. Risk characteristics of the Portfolio relative to that of the benchmark can be analyzed to determine if any imbalances exist and if appropriate adjustments should be made to the Portfolio.

### 3. Bias Performance Report

A bias performance report shall be generated within the month to display the Portfolio's performance versus that of the benchmark month-to-date. This report shall show how each economic or industry sector of the Portfolio is performing relative to that of the benchmark. The report shall also show how each stock within the Portfolio is performing relative to the stock's weighting within the benchmark.

### 4. Over / Under Weighting Report

An over/under weight report shall be generated monthly displaying stocks with weights five basis points or greater than the benchmark weight. These stocks shall be screened and evaluated for possible action to decrease/or increase the security's weight in the Portfolio towards the benchmark weight.

## VI. BENCHMARK

Independent sources are responsible for maintaining the benchmarks as well as calculating and reporting the return of the benchmarks to the System.

- A. Domestic: The benchmark for the Fund shall be entitled the "[CalPERS Custom Wilshire 2500 Index](#)". This custom benchmark shall be constructed and maintained by Wilshire Associates. It shall be defined as the top 2500 securities of the Wilshire 5000 (excluding REITS and tobacco stocks) with dividends reinvested, and be based on market capitalization and annual reconstitution. Its composition shall provide broad market exposure to the total U.S. equity market while minimizing transaction costs.
- B. Domestic Microcap: The benchmark for the Fund shall be entitled the "CalPERS Custom Wilshire Microcap Index". This custom benchmark shall be constructed and maintained by Wilshire Associates. It shall be defined as the Wilshire 5000 (excluding REITS and tobacco stocks) less the CalPERS Custom Wilshire 2500 Index stocks with dividends reinvested, and be based on market capitalization and annual reconstitution. Its composition shall provide the remaining exposure to the total U.S. equity market that the CalPERS Custom Wilshire 2500 Index omits.
- C. International: The benchmark for the Fund shall be entitled the "CalPERS Financial Times Stock Exchange (FTSE) All World, ex US, ex Tobacco, [Capitalization Weighted](#) Index". The markets



included are limited to the countries in the System's Permissible Country Equity Policy and is calculated on an unhedged basis.

## VII. GENERAL

Investors, managers, consultants, or other participants selected by the system shall make all calculations and computations on a market value basis as recorded by the System's Custodian.

## VIII. DERIVATIVES AND LEVERAGE POLICY

### A. Strategies

The Fund may utilize financial futures, equity swaps and options in the Portfolio for the following purposes:

1. Permitting the investment of dividends received;
2. Equitizing cash and dividends receivable;
3. Allowing adjustment of the Portfolio's risk characteristics in the most cost effective manner available;
4. Facilitating investment of cash flows related to contributions, withdrawals, or asset allocation compliance.

### B. Justification

Justification for the above mentioned strategies includes the following:

1. Comparing lower transaction costs with the purchase of underlying securities;
2. Equitizing non-spendable cash exposures (e.g. dividend accruals) to get a highly correlated return on that component of the Portfolio;
3. Providing the ability to alter risk characteristics versus the benchmark without disrupting the underlying Portfolio or unnecessarily increasing turnover; and
4. Obtaining matched returns between the benchmark and the Portfolio through investment in custom equity swaps and currency forwards.

**C. Restrictions**

Restrictions on the above mentioned strategies include the following:

1. Writing uncovered calls is prohibited;
2. Leveraging is prohibited. The use of futures contracts as specified in this Policy will not constitute leverage;
3. With the exception of equity swaps and currency forwards, trading non-exchange traded derivatives is prohibited;
4. [Speculating](#) is prohibited;
5. Use of non-CFTC approved futures contracts is prohibited; and
6. Portfolio specific position limits will be established and monitored as detailed in the applicable procedures manual.

**D. Permissible Derivatives**

Derivatives utilized in the index Portfolio may include, but are not limited to the following:

1. Index futures;
2. Style futures;
3. Index options;
4. Currency forwards; and
5. Equity swaps.

**E. Futures Commission Merchants (FCM)**

Futures Commission Merchants are selected with the following broad range of criteria:

1. Low cost clearing and executing charges;
2. Securely capitalized firm;
3. Clear account statements and efficient reconciliation;
4. Responsive personnel;

5. Discrete and efficient operation;
6. Personal interview; and
7. Reference checks.

**IX. GLOSSARY OF TERMS**

Definitions for key words used in this policy are located in the Equity Glossary of Terms which is included in the System's Master Glossary of Terms.